

REMARKS

The title has been amended to characterize the invention as relating to the modulation of endothelial cells. No new matter has been added by way of this amendment.

In response to the Restriction Requirement dated October 19, 2006, Applicants elect with **traverse**, Group X, claims 1-20, 25, 27 and 29-43 drawn to a method of modulating one or more mammalian endothelial cell functional characteristics comprising modulating in vivo the functional level of sphingosine kinase by introducing a nucleic acid encoding sphingosine kinase and use of a nucleic acid encoding sphingosine kinase for modulating the functional level of sphingosine kinase, for examination at this time without prejudice to the filing of any divisional, continuation, or continuation-in-part application upon non-elected claims. Consideration of the elected claims is now requested.

Applicant's basis for traversal is the fact that Groups I and X are related in that they would achieve the same effect. In this regard it is respectfully noted that the Restriction Requirement requires the Applicants to elect one of 18 allegedly distinct inventions which the Examiner asserts, on page 6 of the Restriction Requirement, "are distinct from each other because they are drawn to methods that have distinct steps, require separate compositions for practice and produce different product or results". Further, the Examiner also asserts that "the steps of modulating one or more mammalian endothelial cell functional characteristics comprising modulating *in vitro* of groups I-IX cannot be used *in vivo* for groups X-XVIII".

Further, the Examiner asserts that the manner by which the method would be applied to an *in vitro* situation is entirely different to the manner by which the method would be applied to any *in vivo* situation. This asserted premise is not supported by either the application or general scientific knowledge. Although there may be differences in the means by which the nucleic acid is administered *in vitro* versus *in vivo* delivery, there is otherwise very little difference in terms of the outcome that one would expect using a nucleic acid molecule *in vitro* versus *in vivo*; in particular the functional level of sphingosine kinase in the endothelial cell is modulated irrespective of whether the nucleic acid is administered *in vitro* or *in vivo*. Accordingly, it is considered that there is a clear technical relationship involving an expected

effect shared by all the claims of both group I and group X in the modulation of the functional level of sphingosine kinase by use of a nucleic acid encoding sphingosine kinase.

Applicants respectfully submit that two related inventions may be rejoined and examined together if they share at least one of design, operation, or effect. See MPEP §802.01 which states:

Two or more inventions are related (i.e., not independent) if they are disclosed as connected in at least one of design (e.g., structure or method of manufacture), operation (e.g., function or method of use), or effect. Examples of related inventions include combination and part (subcombination) thereof, process and apparatus for its practice, process and product made, etc. In this definition the term related is used as an alternative for dependent in referring to inventions other than independent inventions.

Related inventions are distinct if the inventions as claimed are not connected in at least one of design, operation, or effect (e.g., can be made by, or used in, a materially different process) and wherein at least one invention is PATENTABLE (novel and nonobvious) OVER THE OTHER (though they may each be unpatentable over the prior art).

In the present case, the inventions of Groups I and X are related, but not distinct as they would logically share the same effect, irrespective of whether the introduction is *in vitro* or *in vivo*. Thus, in accordance with MPEP §802.01, the claims of these two groups are connected at least by effect. Accordingly, it is considered that rejoinder of the inventions of Group I and Group X is appropriate. Lastly, given the search terms to be utilized by the office, Applicants respectfully submit that it would not be an undue burden on the Examiner to rejoin both Groups I and X and examine the same on the merits.

Respectfully submitted,  
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